

## **Appendix J**

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# **Primacy Revision Crosswalks**

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**PRIMACY REVISION CROSSWALK FOR THE ARSENIC RULE**

FEDERAL REQUIREMENT				FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? EXPLAIN ON SEPARATE SHEET
<b>SUBPART A—GENERAL</b>						
<b>§141.6 EFFECTIVE DATES</b>						
The arsenic MCL listed in §141.62 is effective for the purpose of compliance on January 23, 2006. Requirements relating to arsenic set forth in Secs. 141.23(i)(4), 141.23(k)(3) introductory text, 141.23(k)(3)(ii), 141.51(b), 141.62(b), 141.62(b)(16), 141.62(c), 141.62(d), and 142.62(b) revisions in Appendix A of subpart O for the consumer confidence rule, and Appendices A and B of subpart Q for the public notification rule are effective for the purpose of compliance on January 23, 2006. However, the consumer confidence rule reporting requirements relating to arsenic listed in Sec. 141.154(b) and (f) are effective for the purpose of compliance on February 22, 2002.				§141.6(j)		
Regulations set forth in Secs. 141.23(i)(1), 141.23(i)(2), 141.24(f)(15), 141.24(f)(22), 141.24(h)(11), 141.24(h)(20), 142.16(e), 142.16(j), and 142.16(k) are effective for the purpose of compliance on January 22, 2004. [Regulation should have included 141.29(c)(9); unintentional omission; optional.]				§141.6 (k)		
<b>SUBPART C—MONITORING AND ANALYTICAL REQUIREMENTS</b>						
<b>§141.23 INORGANIC CHEMICAL SAMPLING AND ANALYTICAL REQUIREMENTS</b>						
Contaminant	MCL	Methodology	Detection Limit	Table to §141.23(a)(4)(i)		
Arsenic	0.01 <sup>6</sup>	Atomic Absorption;	0.001			
		Furnace Atomic Absorption;	0.0005 <sup>7</sup>			
		Platform-Stabilized Temperature Atomic Absorption;	0.001			

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Gaseous Hydride ICP-Mass Spectrometry 0.0014 <sup>8</sup>			
<p><sup>6</sup> The value for arsenic is effective January 23, 2006. Until then, the MCL is 0.05 mg/L.</p> <p><sup>7</sup> The MDL reported for EPA Method 200.9 (Atomic Absorption; Platform - Stabilized Temperature) was determined using a 2x concentration step during sample digestion. The MDL determined for samples analyzed using direct analyses (i.e., no sample digestion) will be higher. Using multiple depositions, EPA 200.9 is capable of obtaining an MDL of 0.0001 mg/L.</p> <p><sup>8</sup> Using selective ion monitoring, EPA method 200.8 (ICP-MS) is capable of obtaining an MDL of 0.0001 mg/L.</p>	Footnotes to Table in §141.23(a)(4)(i)		
The frequency of monitoring for arsenic shall be in accordance with paragraph (c) of this section. [Waiver provision; optional.]	§141.23(a)(5)		
The frequency of monitoring conducted to determine compliance with the maximum contaminant levels in §141.62 for arsenic shall be as follows: [Waiver provision; optional.]	§141.23(c)		
All new systems or systems that use a new source of water that begin operation after January 22, 2004, must demonstrate compliance with the MCL within a period of time specified by the State. The system must also comply with the initial sampling frequencies specified by the State to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in this section.	§141.23(c)(9)		
Where the results of sampling for arsenic indicate an exceedance of the maximum contaminant level, the State may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point.	§141.23(f)(1)		

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For systems which are conducting monitoring at a frequency greater than annual, compliance with the maximum contaminant levels for arsenic is determined by a running annual average at any sampling point. If the average at any sampling point is greater than the MCL, then the system is out of compliance. If any one sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any sample below the method detection limit shall be calculated at zero for the purpose of determining the annual average. If a system fails to collect the required number of samples, compliance (average concentration) will be based on the total number of samples collected.	§141.23(i)(1)																										
For systems which are monitoring annually, or less frequently, the system is out of compliance with the maximum contaminant level for arsenic if the level of a contaminant is greater than the MCL. If confirmation samples are required by the State, the determination of compliance will be based on the annual average of the initial MCL exceedance and any State-required confirmation samples. If a system fails to collect the required number of samples, compliance (average concentration) will be based on the total number of samples collected.	§141.23(i)(2)																										
Arsenic sampling results will be reported to the nearest 0.001 mg/L.	§141.23(i)(4)																										
<table border="0"> <tr> <td>Contaminant Methodology<sup>13</sup></td> <td>EPA</td> <td>ASTM<sup>3</sup></td> <td>SM<sup>4</sup></td> </tr> <tr> <td>Arsenic<sup>14</sup> Inductively Coupled Plasma<sup>15</sup></td> <td><sup>2</sup>200.7</td> <td></td> <td><sup>15</sup>3120B</td> </tr> <tr> <td>ICP-Mass Spectrometry</td> <td><sup>2</sup>200.8</td> <td></td> <td></td> </tr> <tr> <td>Atomic Adsorption; Platform</td> <td><sup>2</sup>200.9</td> <td></td> <td></td> </tr> <tr> <td>Atomic Adsorption; Furnace</td> <td></td> <td>D-2972-93C</td> <td>3113B</td> </tr> <tr> <td>Hydride Atomic Adsorption</td> <td></td> <td>D-2972-93B</td> <td>3114B</td> </tr> </table>	Contaminant Methodology <sup>13</sup>	EPA	ASTM <sup>3</sup>	SM <sup>4</sup>	Arsenic <sup>14</sup> Inductively Coupled Plasma <sup>15</sup>	<sup>2</sup> 200.7		<sup>15</sup> 3120B	ICP-Mass Spectrometry	<sup>2</sup> 200.8			Atomic Adsorption; Platform	<sup>2</sup> 200.9			Atomic Adsorption; Furnace		D-2972-93C	3113B	Hydride Atomic Adsorption		D-2972-93B	3114B	Table to §141.23(k)(1)		
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<sup>14</sup> If ultrasonic nebulization is used in the determination of arsenic by Methods 200.7, 200.8, or SM 3120 B, the arsenic must be in the pentavalent state to provide uniform signal response. For methods 200.7 and 3120 B, both samples and standards must be diluted in the same mixed acid matrix concentration of nitric and hydrochloric acid with the addition of 100 µL of 30% hydrogen peroxide per 100 ml of solution. For direct analysis of arsenic with method 200.8 using ultrasonic nebulization, samples and standards must contain one mg/L of sodium hypochlorite.	Footnotes to Table to §141.23(k)(1)										
Sample collection for arsenic under this section shall be conducted using the sample preservation, container, and maximum holding time procedures specified below:	§141.23(k)(2)										
<table border="1" data-bbox="98 764 1045 860"> <thead> <tr> <th>Contaminant</th><th>Preservative<sup>1</sup></th><th>Container<sup>2</sup></th><th>Time<sup>3</sup></th></tr> </thead> <tbody> <tr> <td>Arsenic</td><td>Conc HNO<sub>3</sub> to pH&lt;2</td><td>P or G</td><td>6 mo.</td></tr> </tbody> </table> <p><sup>1</sup> For cyanide determinations samples must be adjusted with sodium hydroxide to pH 12 at the time of collection. When chilling is indicated the sample must be shipped and stored at 4 deg. C or less. Acidification of nitrate or metals samples may be with a concentrated acid or a dilute (50% by volume) solution of the applicable concentrated acid. Acidification of samples for metals analysis is encouraged and allowed at the laboratory rather than at the time of sampling provided the shipping time and other instructions in Section 8.3 of EPA Methods 200.7 or 200.8 or 200.9 are followed.</p> <p><sup>2</sup> P = plastic, hard or soft; G=glass, hard or soft.</p> <p><sup>3</sup> In all cases samples should be analyzed as soon after collection as possible. Follow additional (if any) information on preservation, containers, or holding times that is specified in method.</p>	Contaminant	Preservative <sup>1</sup>	Container <sup>2</sup>	Time <sup>3</sup>	Arsenic	Conc HNO <sub>3</sub> to pH<2	P or G	6 mo.	Table to §141.23(k)(2)		
Contaminant	Preservative <sup>1</sup>	Container <sup>2</sup>	Time <sup>3</sup>								
Arsenic	Conc HNO <sub>3</sub> to pH<2	P or G	6 mo.								

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[Analysis under this section shall only be conducted by laboratories that have been certified by EPA or the State.] To receive certification to conduct analyses for arsenic, the laboratory must:	§141.23(k)(3)		
[Achieve quantitative results on the analyses that are within the following acceptance limits:]	[§141.23(k)(3)(ii)]		
Contaminant                      Acceptance Limit  Arsenic.....                      ±30 at ≥0.003 mg/L  [Some States adopt this by reference; if so, States should submit necessary paperwork.]	Table to §141.23(k)(3)(ii)		
§141.24                      ORGANIC CHEMICALS OTHER THAN TOTAL TRIHALOMETHANES, SAMPLING AND ANALYTICAL METHODS			
Systems monitoring annually or less frequently whose sample result exceeds the MCL must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.	§141.24(f)(15)(ii)		
If a system fails to collect the required number of samples, compliance will be based on the total number of samples collected.	§141.24(f)(15)(iv)		
If a sample result is less than the detection limit, zero will be used to calculate the annual average.	§141.24(f)(15)(v)		

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All new systems or systems that use a new source of water that begin operation after January 22, 2004, must demonstrate compliance with the MCL within a period of time specified by the State. The system must also comply with the initial sampling frequencies specified by the State to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in this section.	§ 141.24(f)(22)		
Systems monitoring annually or less frequently whose sample result exceeds the regulatory detection level as defined by paragraph (h)(18) of this section must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.	§ 141.24(h)(11)(ii)		
If a system fails to collect the required number of samples, compliance will be based on the total number of samples collected.	§ 141.24(h)(11)(iv)		
All new systems or systems that use a new source of water that begin operation after January 22, 2004, must demonstrate compliance with the MCL within a period of time specified by the State. The system must also comply with the initial sampling frequencies specified by the State to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in this section.	§ 141.24(h)(20)		
<b>SUBPART F—MAXIMUM CONTAMINANT LEVEL GOALS</b>			
<b>§141.51 MAXIMUM CONTAMINANT LEVEL GOALS FOR INORGANIC CONTAMINANTS</b>			
Contaminant	MCLG (mg/L)	Table to § 141.51(b)	
Arsenic.....	zero <sup>1</sup>		



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<sup>1</sup> This value for arsenic is effective January 23, 2006. Until then, there is no MCLG.	Footnote to Table to §141.51(b)		
<b>SUBPART G—NATIONAL REVISED PRIMARY DRINKING WATER REGULATIONS: MAXIMUM CONTAMINANT LEVELS</b>			
<b>§141.60 EFFECTIVE DATES</b>			
The effective date for §141.62(b)(16) is January 23, 2006.	§141.60(b)(4)		
<b>§141.62 MCLs FOR INORGANIC CONTAMINANTS</b>			
The maximum contaminant levels for inorganic contaminants specified in paragraphs (b)(2)-(6), (b)(10), and (b)(11)-(16) of this section apply to community water systems and non-transient, non-community water systems.	§141.62(b)		
Contaminant MCL (mg/L) (16) Arsenic..... 0.01	Table to §141.62(b)		
<b>BAT for Inorganic Compounds Listed in Section 141.62(B)</b> [Variances; optional.]  Chemical name BAT(s) Arsenic <sup>4</sup> ..... 1, 2, 5, 6, 7, 9, 12 <sup>5</sup>	Table to §141.62(c)		
4. BATs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V. [Variances; optional.] 5. To obtain high removals, iron to arsenic ratio must be at least 20:1. [Variances; optional.]	Footnotes to Table to §141.62(c)		

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<i>Key to BATs in Table</i> [Variances; optional.] 1 = Activated Alumina 2 = Coagulation/Filtration (not BAT for systems <500 service connections) 5 = Ion Exchange 6 = Lime Softening (not BAT for systems <500 service connections) 7 = Reverse Osmosis 9 = Electrodialysis 12 = Oxidation/Filtration	Key to BATs in Table to §141.62(c)		
<b>SUBPART O—CONSUMER CONFIDENCE REPORTS</b>			
<b>§141.154 REQUIRED ADDITIONAL HEALTH INFORMATION</b>			
Ending in the report due by July 1, 2001, a system which detects arsenic at levels above 0.025 mg/L, but below the 0.05 mg/L, and beginning in the report due by July 1, 2002, a system that detects arsenic above 0.005 mg/L and up to and including 0.01 mg/L:	§141.154(b)		
Must include in its report a short informational statement about arsenic, using language such as: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.	§141.154(b)(1)		
Beginning in the report due by July 1, 2002, and ending January 22, 2006, a community water system that detects arsenic above 0.01 mg/L and up to and including 0.05 mg/L must include the arsenic health effects language prescribed by Appendix A to Subpart O.	§141.154(f)		

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<b>APPENDIX A TO SUBPART O - REGULATED CONTAMINANTS</b>									
Contaminant (units)	Tradi- tional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language	Table to Appendix A to Subpart O		
Inorganic contaminants:									
Arsenic (ppb)	0.01	1000	10	0	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.			
1. These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.							Footnotes to Table to Appendix A		

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<b>SUBPART Q—PUBLIC NOTIFICATION</b>						
<b>APPENDIX A TO SUBPART Q-NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE<sup>1</sup></b>						
<b>MCL/MRDL/TT violations<sup>2</sup>   Monitoring &amp; testing procedure violations</b>				Appendix A to Subpart Q, I.B.2		
Tier of public notice requi- red	Citation	Tier of public notice required	Citation			
B. Inorganic Chemicals (IOCs)				Appendix A to Subpart Q, I.B.2		
2. Arsenic	2	<sup>8</sup> 141.62(b)	3			
			<sup>9</sup> 141.23 (a), (c)			
Redesignate endnotes 8 through 17 as endnotes 10 through 19 in the table and at the end of the table.				Appendix A to Subpart Q, I.B.2		
8. The arsenic MCL citations are effective January 23, 2006. Until then, the citations are Sec. 141.11(b) and Sec. 141.23(n). 9. The arsenic Tier 3 violation MCL citations are effective January 23, 2006. Until then, the citations are Sec. 141.23(a), (l).				Footnotes to Appendix A, I.B.2		

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<b>APPENDIX B TO SUBPART Q-STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION</b>			
Contaminant                      Arsenic <sup>11</sup> MCLG <sup>1</sup> (mg/L)                      0 MCL <sup>2</sup> (mg/L)                      0.01  Standard health effects language for public notification: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.	Table to Appendix B to Subpart Q		
1. MCLG-Maximum contaminant level goal. 2. MCL-Maximum contaminant level. 11. These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.	Footnotes to Table to Appendix B to Subpart Q		

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